Mohammed Azeezulla

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EDUCATION

DePaul University   Chicago, IL
Masters in Artificial Intelligence   *January 2024 – November 2025*

MVJ College of Engineering   Bengaluru, KA
Bachelor's in Computer Science Engineering   *September 2019 – September 2023*

EXPERIENCE

Software Artificial Intelligence Engineer   July 2025 – Present
TekAnthem   *Chicago, IL*
- Developed an end-to-end testing agent-based system on CrewAI using Python, driving product development by leveraging data processing and multimodal AI to auto-generate and self-heal test scripts, reducing manual testing workload by 60%.
- Devised Gemini using Python to extract DOM structures from screenshots, enabling element targeting with 90% accuracy.
- Engaged Claude to generate Playwright and PyTest code from visual context, preventing test development effort by 70%.
- Collated failures with RAG memory and iterated Claude healer using visual feedback, increasing test recovery by 70%.
- Generated real-time HTML reports and visualizations by integrating OpenAI with LangChain and React, deploying on AWS with Docker and Kubernetes to improve scalability and reduce feedback turnaround time by 50%.

Graduate Research Assistant   January 2025 – June 2025
DePaul University   *Chicago, IL*
- Implemented a novel tree-based self-attention mechanism to optimize Transformer memory to $O(n)$ and compute to $O(n \log n)$, expanding memory efficiency by 20% and improving downstream classifications in NLP tasks.
- Optimized long-sequence NLP and forecasting tasks in PyTorch/TensorFlow, applying core machine learning principles and GPU strategies to cut training time by 15%.
- Managed the ML lifecycle from preprocessing to training, iterating with benchmarks and ablation studies, and evaluating models to improve accuracy by 4% and enhance explainability.
- Collaborated and communicated with the team through weekly code reviews, providing feedback that improved code quality by 15% each week and documenting designs, code, and results clearly.

Associate Generative AI Developer   July 2024 – January 2025
Soulmi Health   *Lombard, IL*
- Developed and led the Insurance Mail Automation project, prototyping a Python and API-driven pipeline to scan over 1,000 inbound mails daily and integrating AI-powered bots for claims automation, reducing manual review by 70%.
- Performed data extraction and ingestion on documents leveraging Mistral OCR and databases, collaborating with the team to clean data using regex and spaCy, while ensuring ethical AI by removing 90% of HIPAA-sensitive information.
- Automated claims processes by fine-tuning and evaluating OpenAI LLMs on synthetic data, testing for hallucinations to achieve 90% accuracy and a 5× speedup.
- Experimented data pipelines for patient analytics and reporting, maintained through GCP with Postgresql and enhanced by MLOps practices (CI/CD, Docker, Kubernetes), improving user experience and reducing data-access delays by 90%.

PROJECTS

ATS Scanner – ScanATS | Python, CI/CD, Docker, AWS   January 2025 – Present
- Spearheaded an AI career platform with ATS scoring, a portfolio builder, and an interview chatbot, driven by curiosity in AI observability and the use of synthetic data to enhance evaluation, boosting user task completion by 65%.
- Orchestrated data integration between Google Vision and DeepSeek sourced through the Hugging Face API with LangGraph to analyze layouts, score resumes, and extract jobs, achieving 90% match accuracy through experimentation and evaluation.
- Configured JWT auth with HttpOnly cookies and linked MongoDB to securely persist user data, mitigating errors by 40%.
- Allocated CI/CD workflows with Git and Docker, deploying scalable AWS to ensure 99% uptime and seamless delivery.

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, HTML, CSS, MySQL
Cloud & DevOps: AWS, GCP, Docker, Kubernetes, Git, CI/CD
Databases & Frameworks: MongoDB, Postgresql, FastAPI, Streamlit, JWT, Playwright, PyTest
AI/ML Tools: PyTorch, TensorFlow, LangChain, LangGraph, CrewAI, OpenAI, Claude, DeepSeek, Google Vision, Hugging Face